

CLAIMS

1. A soluble coenzyme-binding glucose dehydrogenase, which catalyzes a reaction for oxidizing glucose in the presence of an electron
5 acceptor and has a low activity to maltose.
2. The coenzyme-binding glucose dehydrogenase of claim 1, which catalyzes a reaction for oxidizing glucose in the presence of an electron acceptor, has a 5% or less specific activity to maltose, and is inhibited by
10 1,10-phenanthroline.
3. The coenzyme-binding glucose dehydrogenase of claim 1 or 2, wherein its activity is 50% or more inhibited at 1mM of 1,10-phenanthroline as a final concentration.
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4. The coenzyme-binding glucose dehydrogenase of any one of claims 1 to 3, wherein the coenzyme is a flavin compound.
5. The coenzyme-binding glucose dehydrogenase of any one of claims
20 1 to 4, which oxidizes hydroxyl group in the 1st-position of glucose.
6. The coenzyme-binding glucose dehydrogenase of any one of claims 1 to 5, which is derived from a microorganism.
- 25 7. The coenzyme-binding glucose dehydrogenase of claim 6, which is derived from a eukaryotic microorganism.
8. The coenzyme-binding glucose dehydrogenase of claim 7, which is derived from an *Aspergillus terreus*.

9. The coenzyme-binding glucose dehydrogenase of claim 8, which is derived from the *Aspergillus terreus* under the accession number FERM BP-08578.

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10. A coenzyme-binding glucose dehydrogenase, which is a protein having characteristics of the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 5 or having substantially equivalent characteristics thereto, which has an amino acid sequence encoding the protein or an amino acid sequence containing a mutation resulting from a deletion, substitution or addition of one or more amino acid residues in the sequence, wherein the protein is biologically active and stable.

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11. A microorganism having an ability of producing the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 5.

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12. The microorganism of claim 11, which is a eukaryotic microorganism.

13. The microorganism of claim 12, which is an *Aspergillus terreus*.

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14. The microorganism of claim 13, which is the *Aspergillus terreus* under the accession number FERM BP-08578.

15. A method for producing the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 5, which comprises culturing the microorganism of any one of claims 11 to 14 and producing and recovering the coenzyme-binding glucose dehydrogenase in the culture.

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16. A method for measuring glucose, which comprises using the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 10.
17. The method according to claim 16, wherein the method is carried out with ferricyanide at a final concentration of 2mM to 500mM.
18. A reagent composition for measuring glucose comprising the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 10.
19. The reagent composition of claim 18, wherein ferricyanide is employed at a final concentration of 2mM to 500mM.
20. A biosensor for measuring glucose using the coenzyme-binding glucose dehydrogenase of any one of claims 1 to 10.
21. The biosensor of claim 20, wherein ferricyanide is employed at a final concentration of 2mM to 500mM.